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THE ACQUISITION OF SPANISH GRAMMAR BY MEXICAN CHILDREN.

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USING THE METHODOLOGY DEVISED BY JEAN BERKO (1958) TO TEST AMERICAN CHILDREN ON THEIR INTERNALIZATION OF ENGLISH GRAMMATICAL RULES, 92 MEXICAN CHILDREN OF CIUDAD GUZMAN, JALISCO, WERE TESTED TO DETERMINE THEIR INTERNALIZATION OF SPANISH GRAMMAR. THE CHILDREN WERE FROM THE LOWER SOCIO-ECONOMIC CLASS, AS WERE THE 18 ADULTS WHO TOOK THE SAME TEST TO DETERMINE "CORRECT" RESPONSES. ONE GROUP OF 30 CHILDREN RANGED IN AGE FROM 4 TO 7, THE SAME AGES AS THE CHILDREN IN BERKO'S GROUP. THE OTHER TWO GROUPS, OF EQUAL SIZE, WERE CHILDREN FROM 8 TO 10 YEARS AND 11 TO 12 YEARS OLD. THERE WERE APPROXIMATELY AN EQUAL NUMBER OF BOYS AND GIRLS IN EACH GROUP. THE TEST REQUIRED THE CHILDREN TO APPLY A BASIC GRAMMATICAL RULE (THE FORMATION OF PLURALS, DIMINUTIVES, AGENTIVES, VERB FORMS, OR POSSESSIVES) TO A NONSENSE WORD. THE PROCESS OF INTERNALIZATION WAS WELL UNDER WAY IN THE YOUNGEST CHILDREN AND CONTINUED AT A SIGNIFICANT RATE SO THAT THE 11-12 AGE GROUP DEMONSTRATED A COMMAND OF MOST OF THE GRAMMATICAL CATEGORIES TESTED. THERE WAS NO SIGNIFICANT DIFFERENCE BETWEEN BOYS AND GIRLS IN THE ACQUISITION OF THESE RULES. RESULTS OF THIS TEST SHOW THE PROFITABILITY OF APPLYING TECHNIQUES DEVISED FOR THE STUDY OF ENGLISH LANGUAGE ACQUISITION TO OTHER LANGUAGES. THIS ARTICLE APPEARED IN "ANTHROPOLOGICAL LINGUISTICS," VOL. 8, NO. 9, DEC., 1966. (JD)

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# THE ACQUISITION OF SPANISH GRAMMAR BY MEXICAN CHILDREN*

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0. Introduction
1. Methodology
2.1. Age and sex differences in test results
2.2. Formation of grammatical categories tested
3. Conclusion

0. In 1958, Jean Berko published the results of a study of English morphology of American children. The methodology devised by Berko permitted her to test for the internalization of grammatical rules. The present study, which relies for the most part on a modification of the methodology used by Berko, is the result of research on the acquisition of Spanish morphology by Mexican children. We shall discuss in general the internalization of Spanish grammatical rules and in particular the age and sex differences and the relative degree of difficulty in the implicit learning of these rules. We shall also compare Berko's results with our own.

The testing procedure required the child to apply a grammatical rule to a nonsense word in order to derive the correct form of that word in a given linguistic context. We assumed that if the child could do this successfully, he had internalized the particular grammatical rule in question. For example, if a child could tell us that the correct plural form of tifa* is tifas* (* denotes nonsense-words), we assumed that he implicitly knew the rule for the formation of the plural for nouns which end in a vowel. If a child gave us the form ticará* in a context calling for the use of the future tense after he had been given the form tica* in the present tense, we assumed that he had learned the rule for the formation of the future tense on an -ar verb. The fact that a child could tell us that the plural for an actual word such as zapato is zapatos, or that the future tense of toma is tomará, on the other hand, would tell us nothing more than that he knew these particular forms. Since he may have memorized the forms in question, we would be able to say nothing concerning the internalization of the grammatical rules which apply. However, a child who can correctly supply the future tense when given a word in the present tense, a word which he has never heard before, has obviously internalized the grammatical rule which applies to that particular type of linguistic situation.

For a number of reasons, primarily the short interest and attention span of children, it was impossible to test for every Spanish grammatical rule. Categories were selected which we felt were either representational or which,



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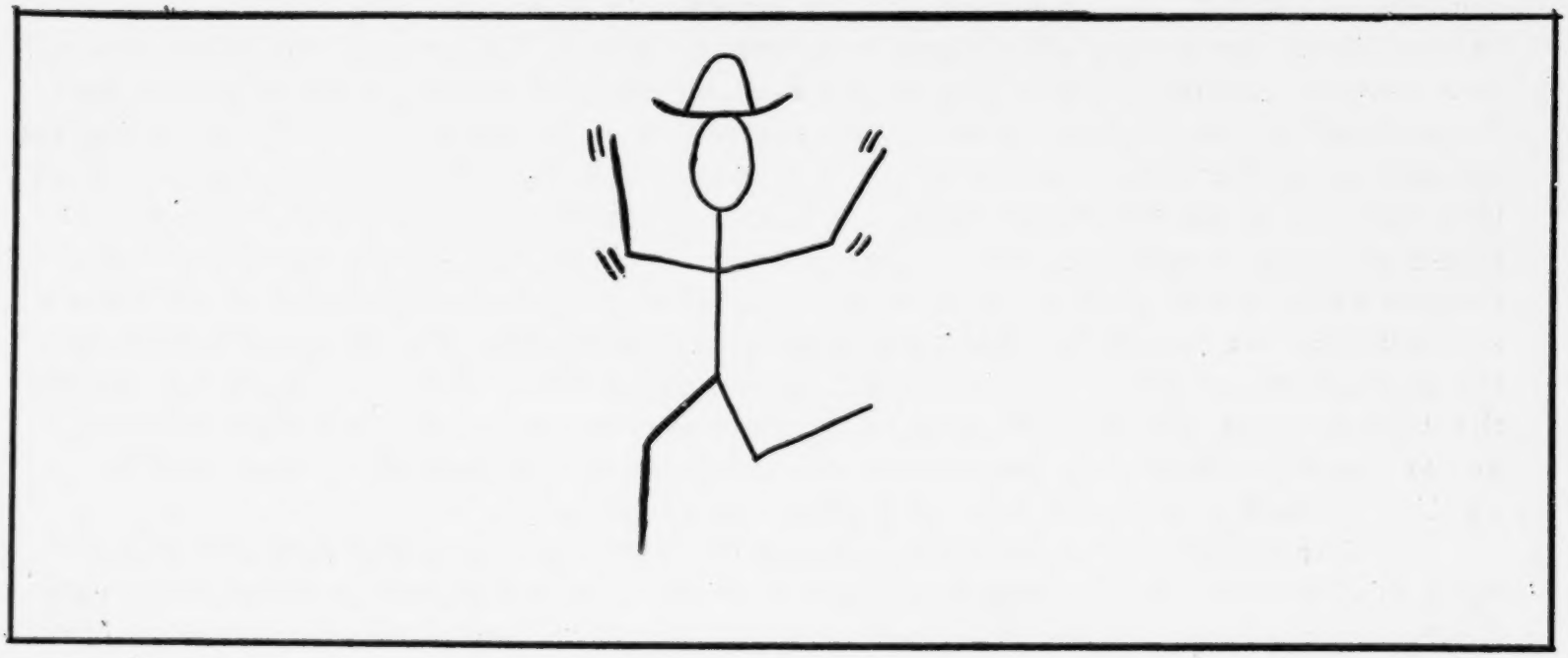
for purposes of comparison, directly corresponded to Berko's categories in English. The areas in which we tested included the following: formation of plurals; formation of diminutives; formation of the third person future, preterite, imperfect, and present perfect tenses from the third person present tense; the addition of suffixes which denote a place where something is made or sold; the formation of the agentive; and the addition of suffixes which indicate a person who makes, sells, or is in charge of something; and the formation of singular and plural possessives.

1. The fieldwork for the study was conducted in Ciudad Guzman, a small city in the state of Jalisco, Mexico. Most of the actual testing was done at the local health clinic where the children came for free medical examinations and treatment. A very small proportion was done at a Catholic grade school. The children tested were of the lower socio-economic class, and their fathers were principally employed as farmers and day-laborers. The subjects were both male and female and ranged in age from five to twelve years. It should be noted that the age range of the Mexican children is greater and extends five years beyond the oldest children tested by Berko (1958:153). We felt that this expanded age range would enable us to see more clearly any developmental trends which might exist.

In order to test for evidence of internalization of grammatical rules, a nonsense word was presented in one type of linguistic framework. The child was then presented with a different linguistic frame and asked to provide the form of the nonsense word appropriate to that frame. To facilitate this task, each child was shown a picture which corresponded to the type of linguistic frame used. There were twenty such pictures. These consisted of simple line drawings of cartoon-like characters, which depicted the animal or object under discussion (see figure 1).

Figure I



For example, a child was shown a picture of a stick-man balanced on one foot and waving his arms and was told, "El hombre suecha*. Lo hace hoy. Ayer, lo hizo. Ayer, el _____." (The man suecha*-s. He does it today. Yesterday, he did it. Yesterday, he _____). In this particular case, the child was given a nonsense verb, suecha*, which is in the third person, present tense, and was asked to supply the correct form in the third person, past tense, or suechó*.

In order to eliminate confusion resulting from mispronunciation, a native speaker of Spanish, an elementary school teacher in Ciudad Guzman, administered the test to the children.

In contrast to Berko (1958:157-158), we experienced considerable difficulty in eliciting answers from subjects. For this reason, it was decided to precede each series of questions which tested for a particular grammatical category with an example question which used a real noun or verb. For example, before he was tested on the formation of plurals, each child was shown a picture of first one cat, and then two, and was told, "Este es un gato. Ahora hay otro. Hay dos de ellos. Hay dos _____". (This is a cat. Now there is another one. There are two of them. There are two _____). This is a departure from Berko's procedure which was necessitated by the children's difficulty in understanding the task at hand. This may in part be explained by a difference in familiarity with testing situations of this kind. American middle-class children have probably been exposed to formal testing situations far more frequently than have Mexican children of the lower socio-economic class. We feel, however, that the use of examples did not affect the reliability of the test. It is improbable that a child of five to twelve years would be able to generalize from one example, particularly in the absence of any explicit statement as to the nature of the information being sought. That is to say, when a child was shown a picture of two cats or two tifas*, he was not told to form the plural of 'cat' or 'tifa*'. As far as the subject was concerned, he was not giving us the noun plus a plural suffix. He was merely telling us what more than one cat or more than one tifa* are called. The purpose of the example, then, was to indicate to the child what was expected of him in terms of procedure.

The following is the complete test, in the order in which the items were presented, with the omission of the examples. Pronunciation is indicated by regular Spanish orthography. A statement of the grammatical rule being tested precedes each item. Each item is given in Spanish, as it was presented, and it is followed in parenthesis by an English translation.

1. (Plural) Esta es una tifa*. Ahora hay otra. Hay dos de ellas. Hay dos _____. (This is a tifa*. Now there is another one. There are two of them. There are two _____).

2. (Plural) Esta es una fepa*. Ahora hay otra. Hay dos de ellas. Hay dos _____. (This is a fepa*. Now there is another one. There are two of them. There are two _____).

3. (Plural) Este es un fetor*. Ahora hay otro. Hay dos de ellos. Hay dos _____. (This is a fetor*. Now there is another one. There are two of them. There are two _____).

4. (Diminutive) Este es un fetor* pequeño. ¿Cómo se llama un fetor* pequeño? (This is a small fetor*. What do you call a small fetor*?)

5. (Diminutive) Este es un tifo* pequeño. ¿Cómo se llama un tifo* pequeño? (This is a small tifo*. What do you call a small tifo*?)

6. (Agentive-active) Este es un hombre que sabe tica*. Está ticando*. ¿Cómo se llama un hombre que tica*? (This is a man who knows how to tica*. He is tica*-ing. What do you call a man who tica*-s?)

7. (Place of business) Esta es una tienda que vende pretas*. ¿Cómo se llama una tienda que vende pretas*? (This is a store that sells pretas*. What do you call a store that sells pretas*?)

8. (Agentive-occupation) Este es un hombre que vende pretas*. ¿Cómo se llama un hombre que vende pretas*? (This is a man who sells pretas*. What do you call a man who sells pretas*?)

9. (Future Tense) El hombre tica*. Mañana lo hará. Mañana, él _____. (The man tica*-s. Tomorrow, he will do it. Tomorrow, he _____.)

10. (Present Perfect Tense) El hombre tica*. Lo ha hecho muchas veces. Muchas veces, él ha _____. (The man tica*-s. He has done it many times. Many times, he has _____.)

11. (Past Tense-Imperfect) El hombre tica*. Lo hace todos los días. Todo el año pasado, lo hacía. Todo el año pasado, él _____. (The man tica*-s. He does it every day. All the past year he did it. All the past year, he_____.)

12. (Past Tense-Preterite) El hombre soste*. Lo hace hoy. Ayer, lo hizo. Ayer, él _____. (The man soste*-s. He does it today. Yesterday, he did it. Yesterday, he_____.)

13. (Present Perfect Tense) El hombre soste*. Lo ha hecho muchas veces. Muchas veces, él ha _____. (The man soste*-s. He has done it many times. Many times he has _____.)

14. (Future Tense) El hombre soste*. Mañana, lo hará. Mañana, él _____. (The man soste*-s. Tomorrow, he will do it. Tomorrow, he _____.)

15. (Past Tense-Imperfect) El hombre tote*. Lo hace todos los días. Todo el año pasado, lo hacía. Todo el año, él _____. (The man tote*-s. He does it every day. All the past year, he did it. All the past year, he _____.)

16. (Future Tense) El hombre tote*. Mañana, lo hará. Mañana, él _____. (The man tote*-s. Tomorrow he will do it. Tomorrow, he _____.)

17. (Past Tense-Preterite) El hombre tote*. Lo hace hoy. Ayer, lo hizo. Ayer él _____. (The man tote*-s. He does it today. Yesterday he did it. Yesterday, he _____.)

18. (Present Perfect Tense) El hombre suecha*. Lo ha hecho muchas veces. Muchas veces, él ha _____. (The man suecha*-s. He has done it many times. Many times, he has _____.)

19. (Past Tense-Preterite) El hombre suecha*. Lo hace hoy. Ayer lo hizo. Ayer él _____. (The man suecha*-s. Today he does it. Yesterday he did it. Yesterday, he _____.)

20. (Past Tense-Imperfect) El hombre suecha*. Lo hace todos los días. Todo el año pasado, lo hacía. Todo el año pasado, él _____. (The man suecha*-s. He does it every day. All the past year, he did it. All the past year, he _____.)

21. (Possessive-singular) Esta es una tifa*. quíen tiene una botella. ¿De quíen es la botella? (This is a tifa* who has a bottle. Whose bottle is it?)

22. (Possessive-plural) Hay dos tifos*. Los dos tienen sombreros. ¿De quíen son estos sombreros? (There are two tifos*. They both have hats. Whose hats are they?)

Since this project was designed to investigate the internalization of grammatical rules, formal rules as presented in grammar books could not be used as a criterion for correctness. Children of this age have not learned to speak their native language from grammar books. Rather, they have learned to speak by constant exposure to the speech of other individuals, particularly their parents and older siblings. We were not interested in discovering whether their speech conformed to the standards of 'correctness' as decreed by grammarians and authors of dictionaries, but whether they had internalized those grammatical rules to which they had been exposed. The test was therefore administered to eighteen adults of the same socio-economic class as the children. The adults agreed unanimously on most of their answers. For items on which there was not complete agreement, each variant of the answer was considered to be correct. Table I shows the responses of the adults. The number of the answer corresponds to the number of the question in the test. The figure in parenthesis following each word indicates the number of adults who gave this particular response to the question.

Table I

Adult Responses

1. tifas (18)
2. fepas (18)
3. fetores (18)
4. fetorcito (15); fetorito (2); fetorocito (1)
5. tifito (9); tifocito (6); tifonito (3)
6. ticador (18)
7. pretería (18)
8. pretero (18)
9. ticará (18)
10. ticado (18)
11. ticaba (18)
12. sostió (18)
13. sosteado (16); sostido (2)
14. sosteará (18)
15. totiaba (18)
16. totiará (17); totira (1)
17. totió (18)
18. suechado (18)
19. suechó (18)
20. suechaba (18)
21. de la tifa (14); de ella (4)
22. de los tifos (11); de ellos (7)

It should be noted that the forms given by the adults for the -er/ -ir verbs totir* and soster* were endings which normally apply only to -ar verbs. Thus in response to item thirteen, the form sosteado* was given sixteen times and the form sostido*, which should be correct according to Spanish rules of grammar, is given only twice. The adults attached suffixes which would normally apply to verbs whose infinitives end in -ar to forms which could only have been derived from -er/ -ir infinitives. However, for the reasons mentioned above, we must consider the standard of correctness to be the answers given by the adults. Most of the children also gave responses to -er/ -ir verbs which were correct only for -ar verbs. They have internalized a grammatical rule which, although inappropriate in the eyes of grammarians, is nevertheless the rule which is applied by their adult models when confronted with the same linguistic situation.

2.1. One of the principal purposes of the study was the investigation of the possible correlations between advancement in years of age and progression in the acquisition of grammatical rules. One would predict that the older a child is, the more likely the possibility that he has internalized a particular grammatical rule. To test this hypothesis, we have divided our sample into three age groups and have tested the significance of the differences in the number of

correct answers given by each age group in each of the ten grammatical categories. We have also computed the percentage of correct answers given by each of the three age groups for each of the twenty items in the test.

Because the children in Berko's sample ranged in age from four to seven years, we decided, for the sake of possible comparison, to assign the children in our sample of this same age range to one group. Children who range in age from eight to ten years make up our second group; the third group is composed of children who range in age from eleven to twelve years. Group one contains fifteen boys and fifteen girls; group two, eighteen boys and fourteen girls; and group three, the oldest age group, fourteen boys and sixteen girls.

Prior to comparison of the number of correct answers given by each age group, it was necessary to determine whether there was any significant difference in the answers given by boys as opposed to those given by girls. The sexes were compared in each of the three age groups for all ten grammatical categories. The chi-square criterion with Yate's correction for small samples was applied as a test of the level of significance of the differences. There was no significant difference between the sexes in any of the ten grammatical categories for any of the age groups. Although our procedure here differs somewhat from that used by Berko (1958: 158-159), the results are the same. In both Mexican Spanish and American English, boys and girls internalize grammatical rules at about the same age.

Since we found no significant differences between the percentage of correct answers given by the two sexes, the answers of the boys were combined with those of the girls in order to look for differences between age groups. As mentioned above, the children were divided into three age groups. The percentage of correct answers given by each age group for each item can be seen in Table II. Table III presents the percentage of correct answers given by each age group in each of the ten grammatical categories. Chi-square corrected for small frequencies was applied to each category, with the results appearing in Table IV. The eight - ten year age group did significantly better than the five - seven year age group on five of the ten categories, whereas the eleven - twelve year age group did significantly better on four of the ten categories than did the eight - ten year age group. Compared with the five - seven year age group, the eleven - twelve year age group did significantly better on seven of the ten categories. Although differences were not always significant between the age groups, there was a steady progression of correct answers from younger to older children, as illustrated in Table III.

2.2.1. Taken as a whole, the group had very little difficulty in the formation of the plurals, provided the noun ended with a vowel. Such plurals are formed by suffixing the allomorph /-s/. Ninety-eight and three-tenths percent of the answers given for vowel-ending nouns were correct. However, for nouns ending in a consonant, which require the plural allomorph /-es/, only 44.7 percent of the answers were correct. The mistake most commonly made for this form was the simple repetition of the word. A less common mistake was the addition of the allomorph /-s/. This indicates that plural formation of vowel-

ending nouns is learned early. The addition of the plural allomorph /-es/ to nouns ending with a consonant does not appear to be learned as early, nor is there much improvement with increase in age up to age twelve. This fact corresponds closely with the findings of Berko (1958:161). The English-speaking American children had considerably more difficulty in forming plurals which required the allomorph /-əz/ than with plurals which required the /-s/ or /-z/ allomorph.

Table II

Age Differences on Inflexional Items

| Item | Percentage of correct answers, 5-7 age group | Percentage of correct answers, 8-10 age group | Percentage of correct answers, 11-12 age group |
|---|---|---|---|
| Plural | | | |
| tifas | 100 | 100 | 100 |
| fepas | 93 | 100 | 97 |
| fetores | 43 | 38 | 53 |
| Diminutive | | | |
| fetorcito | 37 | 44 | 93 |
| tifito | 57 | 78 | 70 |
| Agentive-active | | | |
| ticador | 67 | 76 | 93 |
| Place of business | | | |
| pretería | 43 | 72 | 87 |
| Agentive-occupation | | | |
| pretero | 40 | 54 | 77 |
| Future Tense | | | |
| ticará | 33 | 48 | 90 |
| sosteará | 30 | 36 | 67 |
| totiará | 27 | 50 | 80 |
| Present Perfect Tense | | | |
| ticado | 23 | 53 | 90 |
| sosteado | 57 | 74 | 74 |
| suechado | 37 | 43 | 87 |
| Past Tense Imperfect | | | |
| ticaba | 60 | 64 | 64 |
| totiaba | 47 | 50 | 40 |
| suechaba | 33 | 47 | 60 |

| | | | |
|---|---|---|---|
| Past Tense | | | |
| Preterite | | | |
| sostió | 17 | 37 | 58 |
| totió | 17 | 39 | 61 |
| suechó | 63 | 78 | 87 |
| Possessive | | | |
| de la tifa | 93 | 100 | 91 |
| de los tifos | 97 | 100 | 100 |

Table III

Percentage of Children Giving
Correct Answers for each Category

| Category | 5-6-7 age group | 8-9-10 age group | 11-12 age group |
|---|---|---|---|
| Plurals | 78.9 | 78.9 | 83.1 |
| Diminutives | 48.4 | 75.6 | 82.4 |
| Agentive-active | 66.7 | 75.8 | 93.4 |
| Agentive-occupation | 40.0 | 53.6 | 77.3 |
| Place of business | 43.4 | 71.8 | 87.1 |
| Future Tense | 30.0 | 44.4 | 78.9 |
| Present Perfect Tense | 38.9 | 56.7 | 83.9 |
| Past Tense Imperfect | 48.0 | 53.7 | 54.7 |
| Past Tense Preterite | 32.3 | 50.7 | 68.7 |
| Possessives | 95.0 | 100.0 | 95.4 |

Table IV

Categories: Significance of Differences

| Categories | Level of significant difference 5-7 : 8-10 | Level of significant difference 8-10 : 11-12 | Level of significant difference 5-7 : 11-12 |
|---|---|---|---|
| Plural | --- | --- | --- |
| Diminutive | .01 | .05 | .001 |

| Categories | Level of significant difference 5-7 : 8-10 | Level of significant difference 8-10 : 11-12 | Level of significant difference 5-7 : 11-12 |
|---|---|---|---|
| Agentive-active | --- | --- | .01 |
| Place of business | .01 | --- | .001 |
| Agentive-occupation | --- | --- | .01 |
| Future Tense | .05 | .001 | .001 |
| Present Perfect Tense | .01 | .001 | .001 |
| Past Tense Imperfect | --- | --- | --- |
| Past Tense Preterite | .01 | .05 | .001 |
| Possessive | --- | --- | --- |

2.2.2. Significant differences were found between each age group in the formation of diminutives. Diminutives are formed in Spanish by the addition of a number of different kinds of suffixes. For the nouns which we used, there seemed to be no internalized grammatical rule which would lead to the selection of one alternative over the others by adult speakers of Spanish. As can be seen in Table I, the adults supplied three different diminutive suffixes for each of the two nouns for which we tested. We accepted all of these as correct answers. In spite of this, only 63.3 percent of the children formed the diminutives correctly. The younger children had more difficulty forming the diminutive for a noun ending in a consonant. This parallels the difficulty they experienced in the formation of plurals for consonant-ending nouns. Contrary to the formation of plurals, however, there was a marked improvement with an increase in age for this item, particularly as shown by the eleven - twelve year age group.

2.2.3. In the agentive category, we have included for purposes of analysis the agentive-active, the agentive-occupational, and the place of business suffixes. Although the only significant difference between adjacent age groups occurred for the place of business suffix, there was a steady progression with age in the number of correct answers for each item, and there was a significant difference between the youngest and oldest age groups for all three items. Taken as a group, they formed the agentives correctly 67.7 percent of the time.

2.2.4. There was an increase with age in percentage of correct answers for the inflection of verbs for all tenses tested except the past tense-imperfect. As can be seen in Table IV, significant differences were found between each age

group for all tenses, again with the exception of the past tense-imperfect. However, in terms of percentage of correct answers for the groups as a whole, the past tense-imperfect fared second only to the present perfect tense. The percentage of correct answers for the tenses were as follows: present perfect, 56.0 per cent; past tense-imperfect, 52.1 per cent; future tense, 51.2 per cent; and past tense-preterite, 50.6 per cent. Taken as a group, then, the children were correct on slightly more than half of the verb inflexions.

As we mentioned above, the adults did not supply the correct inflexions for the -er/ -ir verbs. According to formal rules of Spanish grammar, verbs which end in / -e/ in the third person singular, present tense, indicative mood, are invariably -er/ -ir verbs. The nonsense -er/ -ir verbs which we used were presented in this tense and mood as soste* and tote*. Supposedly, therefore, there should have been no question as to whether they were -er/ -ir or -ar verbs. However, both adults and children assumed they were -ar verbs, with the exception of three answers, and supplied -ar inflexional endings. In Table I, the correct answers should have been for items 13, 14, 15, and 16, respectively, sostido*, sosterá*, totiá*, and totirá*. The answers we received, however, were sostiado*, sosteará*, totiaba*, and totiará*. These answers would have been correct had the verbs been -ar verbs. What is operating here is not quite clear. An interesting possibility is that new verbs in the lexicon and verbs which are borrowed from other languages are most often given -ar endings. A quick check of obvious loan words would seem to indicate that this might be the case. For example, the infinitives to telegraph, to televise, to telephone, to refrigerate, to bomb, and to pilot are in Spanish, respectively, telegrafiar, televisar, telefonear, refrigerar, bombardear, and pilotear. Consequently, verbs which are nonsense words, and are therefore new words in the Spanish lexicon, are given the inflexions which an -ar verb would receive.

The significant progression in number of correct verb inflexions indicates a progressive internalization with age of rules concerning verb tense (see Table IV). This is particularly marked for all -ar verb endings in the amount of improvement shown by the eleven-twelve year age group over the eight-ten year age group. The past tense-imperfect, however, is an exception to the progression, there being no significant improvement with increase in age from five to twelve. On the other hand, the percentage of correct answers for this tense was high in the younger age groups, indicating that the grammatical rule for its formation is internalized early, as compared with other tenses. In the eleven-twelve year age group, however, the situation is reversed, in that the children do less well in the past tense-imperfect than in any other tense. The fact that the younger age group does better in this tense than any other tenses may possibly be due to the high degree of regularity in the formation of the past tense-imperfect. The small degree in the amount of improvement shown with age, on the other hand, may possibly be accounted for by the increased awareness of the ambiguity associated with the usage of this tense.

2.2.5. The final category tested for was the formation of the possessive. As indicated in Table IV, there were no significant differences between the age groups in possessive formation. The formation of the possessive for both the singular and plural nouns was tested, and the children did consistently well on both. The percentage of correct answers was high for each age group, being 95 per cent or above, as shown in Table III. This indicates that by the ages of five to seven, the grammatical rule for the formation of the possessive has been internalized and can be used consistently by the children.

3. The purpose of this experiment was to test for the internalization of Spanish grammatical rules of Mexican children of the lower socio-economic class. On a general level, we found that there was no significant difference between boys and girls in the acquisition of these rules. By the age of twelve, the children seem to have a command of most of the grammatical rules of the language. This process of internalization was well under way in the children of the five-seven year age group. It continues at a significant rate between the ages of five and twelve, and by the time the children reach the eleven-twelve year age group, they do significantly better in seven of the ten categories for which we tested.

The children as a whole did better in the formation of plurals than in any other category, with the exception of formation of possessives. There was no significant improvement with age in this category. In Spanish, there are two allomorphs of the plural morpheme. The allomorph /-es/ is used with nouns ending in a consonant, while the allomorph /-s/ is used with nouns which end in a vowel. There was a marked difference in the children's ability to use these allomorphs. They formed the plural for vowel-ending nouns correctly 98.7 per cent of the time, while the plural formations for consonant-ending nouns were only 44.7 per cent correct. A possible explanation for this is the greater frequency of nouns in Spanish which end in a vowel and hence the greater exposure of children to this plural formation. The American children whom Berko tested (1958:161) used the English plural allomorph /-əz/ correctly only 32.8 per cent of the time, while the answers which required the allomorphs /-z/ and /-s/ were 84.6 per cent correct. The Mexican children of a comparable age were correct 96.5 per cent of the time for the nouns ending in a vowel and 43.0 per cent of the time for nouns ending in a consonant. The Mexican children, then, did better in the use of the two plural allomorphs than American children did with allomorphs which are somewhat comparable. Of course, the phonological conditions determining the choice of allomorphs are different in English than in Spanish and the two cases are, therefore, not directly comparable in the full sense of the word.

In the formation of diminutives, there were significant differences among the age groups. Mistakes in this category consisted of the refusal of children to supply any answers at all. Although there are a number of alternative suffixes for forming the diminutive, such as -ito, -illo, -ico, and -ete, the only suffix we received from both adults and children was -ito.

In the category which we term 'agentive', we include the terms agentive-active, agentive-occupation, and place of business. There was a progressive trend of improvement for each of the three items in the category, which corresponded to an increase in the age of the children. There was a significant difference in performance on all items between the five-seven year age group and the eleven-twelve year age group. On the whole, the children did much better in the agentive-active category, being correct 78.7 per cent of the time. For the other two categories, they were correct only 62.1 per cent of the time. This is perhaps explained by the higher frequency of contact by the children with situations and people which require the use of the agentive-active than with business men and businesses.

There was also a steady progression with increase in age in the number of correct answers for verb tenses. There were significant differences between each age group for all tenses except the past tense-imperfect. The children as a whole fared better on the formation of tenses of -ar verbs than for -er/ -ir verbs. In comparison with the other categories, the children did least well with formation of verb tenses.

The children did best in the formation of the possessives, being correct 96.8 per cent of the time. This indicates an almost complete internalization of the rules for forming possessives at an early age. The constructions employed in testing the formation of possessives also tested for gender and sex agreement between article and noun. Of the few mistakes made in this category, three were concerned with the agreement of number, and two with the agreement with sex.

We have presented here a study of the acquisition of some Spanish grammatical categories by Mexican children. This is by no means a complete study of the acquisition of language. Areas such as phonology and syntax remain completely untouched. We feel, however, that this paper represents a step in the right direction. Recent studies such as Frazer, Bellugi, and Brown (1963); Ervin and Miller (1963); Brown and Frazer (1964); and Bellugi and Brown (1964) have made methodological advances in the acquisition of English by children. However, cross-cultural studies in this important area of linguistic behavior have been greatly neglected. The productive techniques which have been devised for the study of acquisition of English should be applied to other languages, with the aim of laying a foundation for cross-cultural comparison.

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